

GOVERNMENT OF INDIA  
MINISTRY OF JAL SHAKTI,  
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA  
REJUVENATION  
**RAJYA SABHA**

**UNSTARRED QUESTION NO. 1200**

ANSWERED ON 13.02.2023

**NATIONAL AQUIFER MAPPING**

1200.       SHRI M. SHANMUGAM                      SHRI VAIKO

Will the Minister of **JAL SHAKTI** be pleased to state:

- (a) whether Government has embarked upon National Aquifer mapping and management programme aimed at delineating aquifer and water availability in the country;
- (b) if so, the details thereof and by when will it be completed;
- (c) whether Government is focusing on wastewater reuse initiatives to conserve water resources; and
- (d) if so, the details of projects undertaken, State-wise, and funds earmarked?

**ANSWER**

**THE MINISTER OF STATE FOR JAL SHAKTI**

(SHRI BISHWESWAR TUDU)

(a) Central Ground Water Board (CGWB) has taken up Aquifer Mapping and Management Programme (NAQUIM) since 2012, under the scheme of Ground Water Management and Regulation. NAQUIM is aimed to delineate aquifer disposition and their characterization for preparation of aquifer/ area specific ground water management plans with community participation. The management plans are shared with the respective State Governments for taking appropriate measures/ implementation.

(b) Out of the total geographical area of around 33 Lakh Sq Km of the entire country, an area of around 25 Lakh Sq Km of mappable area has been identified to be covered under NAQUIM programme. So far, an area of 24.57 Lakh Sq Km (as on 30 Dec 2022) has been covered under the programme. The remaining areas are targeted to be covered by March 2023. State/UT wise area covered under NAQUIM studies are given at **Annexure I**.

(c) & (d) Water being a State subject effective use of treated waste water for conserving fresh water resources falls under States' mandate, however, Central Government has initiated a number of steps in this direction. The important measures in this regard are given as under.

(i) National Water Policy (2012) formulated by this Department advocates for reuse of urban water effluents from kitchens and bathrooms, after primary treatment, in flush toilets ensuring no human contact. Further, NWP advocates that Industries in water short regions may be allowed to either withdraw only the make up water or, should have an obligation to return treated effluent to a specified standard back to the hydrologic system.

(ii) Central Ground Water Authority (CGWA) has been constituted under Section 3(3) of the "Environment (Protection) Act, 1986" for the purpose of regulation and control of ground water development and management in the country. The latest guideline for control and regulation of groundwater extraction with pan-India applicability was notified by the Ministry on 24 September 2020. Guideline stipulates that the requirement of water, with respect to all industries (wherever feasible), for greenbelt (horticulture), shall be met from recycled / treated waste water. Further, it states that installation of Sewage Treatment Plants (STP) shall be mandatory for new infrastructure projects, where ground water requirement is more than 20 m<sup>3</sup>/day. The water from STP shall be utilized for toilet flushing, car washing, gardening etc. Further, guidelines stipulate implementation of dual water supply systems in infrastructure projects.

(iii) A national framework for the reuse of treated waste water has been published by the National Mission for Clean Ganga (NMCG) The framework gives guidelines for the formulation of State reuse policy and is intended to build appropriate market and economic models for the reuse of treated waste water.

(iv) Thermal Power Plants (TPPs) are required as per Ministry of Power's Tariff Policy-2016 to use treated sewage water from STPs operated by municipalities or, other local authorities within a 50 km radius.

(v) Ministry of Housing and Urban Affairs through Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is supplementing the efforts of State Government to provide safe and clean drinking water in urban areas. The recycle / reuse of used water is one of the focus area under AMRUT in 500 selected cities. Through AMRUT projects, 2,840 Million Litres per Day (MLD) sewage treatment capacity has been created so far, of which 1,437 MLD capacity has been developed for recycle/reuse. State-wise detail in this regard is given at **Annexure II**.

(vi) AMRUT 2.0 (FY 2021-22 to 2025-26) aims to make towns / cities 'water secure' with focus on recycle/ reuse of treated used water, which is an admissible element of projects. So far, through AMRUT 2.0 approved projects, 2,795 MLD of sewage treatment capacity creation is planned of which 1,126 MLD is planned to be recycled or reuse. State-wise detail in this regard is given at **Annexure III**.

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**ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 1200 TO BE ANSWERED IN RAJYA SABHA ON 13.02.2023 REGARDING “NATIONAL AQUIFER MAPPING”.**

**State/UT wise area covered under NAQUIM studies**

<b>Sl. No.</b>	<b>State/UT</b>	<b>Total Area (sq km)</b>	<b>Area targeted for coverage (sq km)</b>	<b>Coverage as on 30<sup>th</sup> Dec,2022</b>
1	Andaman & Nicobar UT	8249	1774	1618
2	Andhra Pradesh	163900	141784	133513
3	Arunachal Pradesh	83743	4703	4559
4	Assam	78438	61826	57279
5	Bihar	94163	90567	90567
6	Chandigarh UT	115	115	115
7	Chhattisgarh	136034	96000	93034
8	Delhi	1483	1483	1483
9	DND, DD & Diu	602	602	602
10	Goa	3702	3702	3702
11	Gujarat	196024	160978	155327
12	Haryana	44212	44179	44179
13	Himachal Pradesh	55673	8020	8020
14	Jammu & Kashmir UT	167396	9506	9506
15	Jharkhand	79714	76705	76705
16	Karnataka	191791	191791	185091
17	Kerala	38863	28088	28088
18	Ladakh UT	54840	963	963
19	Lakshadweep UT	32	32	32
20	Madhya Pradesh	308000	269349	266236
21	Maharashtra	307713	259914	257602
22	Manipur	22327	2559	2559
23	Meghalaya	22429	10645	10645
24	Mizoram	21081	700	700
25	Nagaland	16579	910	910
26	Odisha	155707	119636	110563
27	Puducherry UT	479	454	454
28	Punjab	50368	50368	50368
29	Rajasthan	342239	334152	334152
30	Sikkim	7096	1496	1292
31	Tamil Nadu	130058	105829	105829
32	Telangana	111940	104824	104824
33	Tripura	10492	6757	6757
34	Uttar Pradesh	241345	241345	232105
35	Uttarakhand	53484	11430	11430
36	West Bengal	88752	71947	66752
	<b>Total</b>	<b>3289063</b>	<b>2515133</b>	<b>2457561</b>

**ANNEXURE II**

**ANNEXURE REFERRED TO IN REPLY TO PART (c) & (d) OF UNSTARRED QUESTION NO. 1200 TO BE ANSWERED IN RAJYA SABHA ON 13.02.2023 REGARDING “NATIONAL AQUIFER MAPPING”.**

**State-wise status of projects where reuse capacity created under AMRUT**

<b>Sl. No.</b>	<b>State / UT</b>	<b>No</b>	<b>Amount (in ₹ crore)</b>	<b>Qty. (in MLD) created for reuse</b>
1.	Chhattisgarh	4	342.72	326.2
2.	Daman & Diu	1	6.96	4.21
3.	Gujarat	10	1130.89	294
4.	Haryana	5	171.92	57.75
5.	Jammu and Kashmir	1	13.9	2.5
6.	Karnataka	6	287.54	92.25
7.	Kerala	1	5.31	1
8.	Madhya Pradesh	14	1795.08	477.55
9.	Rajasthan	11	1035.92	88.25
10.	Tamil Nadu	2	770	90
11.	Telangana	1	134.57	3.4
12.	Uttarakhand	1	2.99	0.45
	<b>Grand Total</b>	<b>57</b>	<b>5,697.8</b>	<b>1,437</b>

**ANNEXURE III**

**ANNEXURE REFERRED TO IN REPLY TO PART (c) & (d) OF UNSTARRED QUESTION NO. 1200 TO BE ANSWERED IN RAJYA SABHA ON 13.02.2023 REGARDING “NATIONAL AQUIFER MAPPING”.**

**State-wise planned capacity for recycle/reuse under AMRUT 2.0 projects approved so far**

<b>Sl. No.</b>	<b>State/UT</b>	<b>No. of projects where reuse taken up</b>	<b>Amount projects where reuse taken up (in Rs crore)</b>	<b>Planned quantity of water to be recycled or reused (in MLD)</b>
1.	ANDHRA PRADESH	2	83.00	40.00
2.	ASSAM	1	29.36	1.00
3.	CHANDIGARH	1	89.00	90.80
4.	GUJARAT	3	130.78	45.00
5.	KERALA	1	185.00	3.49
6.	LADAKH	1	57.75	5.50
7.	MADHYA PRADESH	6	366.00	32.40
8.	MAHARASHTRA	16	5327.88	417.90
9.	PUNJAB	5	400.00	125.00
10	RAJASTHAN	20	2524.02	182.95
11	TAMIL NADU	1	487.87	32.65
12	UTTAR PRADESH	10	282.18	83.00
13	WEST BENGAL	21	693.71	66.09
	<b>Grand Total</b>	<b>88</b>	<b>10,656.55</b>	<b>1,125.78</b>

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